

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
11 August 2005 (11.08.2005)

PCT

(10) International Publication Number
WO 2005/073711 A3

(51) International Patent Classification⁷: **B01J 20/32**,
G01N 30/48, C07K 1/16, G01N 33/543, 33/68, C07K
1/20, 1/18

(21) International Application Number:
PCT/US2005/001304

(22) International Filing Date: 14 January 2005 (14.01.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/537,342 20 January 2004 (20.01.2004) US

(71) Applicant (*for all designated States except US*): **PALL CORPORATION** [US/US]; 2200 Northern Boulevard, East Hills, NY 11548 (US).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **BOSCHETTI, Egisto** [FR/FR]; 11 rue de la Côte à Béliet, F-78290 Croissy sur Seine (FR). **GIROT, Pierre** [FR/FR]; 7, rue de Terrage, F-75010 Paris (FR).

(74) Agents: **JAY, Jeremy, M.** et al.; Leydig, Voit & Mayer, Suite 300, 700 Thirteenth Street, N.W., Washington, DC 20005 (US).

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
10 November 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: CHROMATOGRAPHIC MATERIAL FOR THE ABSORPTION OF PROTEINS AT PHYSIOLOGICAL IONIC STRENGTH

(57) Abstract: Ion exchange and hydrophobic interaction chromatographic materials are constructed by tethering a terminal binding functionality to a solid support via a hydrophobic linker. The backbone of the linker typically comprises sulfur-containing moieties. Suitable terminal binding functionalities are tertiary amines, quaternary ammonium salts, or hydrophobic groups. These chromatographic materials possess both hydrophobic and ionic character under the conditions prescribed for their use. The separation of proteins from crude mixtures at physiological ionic strength can be accomplished with a chromatographic material of this type by applying pH or ionic strength gradients, thereby effecting protein adsorption and desorption.



WO 2005/073711 A3